

MAT 104 Quiz 11

Friday, October 8, 2004

1. Consider the polynomial $p(x) = -2x^2 - x^3 - x - 3$.

(a) What is the degree of $p(x)$?

The degree is the largest exponent the occurs, which is 3.

(b) What is the leading coefficient of $p(x)$?

The leading coefficient is the coefficient of the x^3 term. Since there is no number written in front, and the x^3 term is being subtracted, the coefficient is -1 .

2. Simplify

$$(3x^2 - 4x - 3) + (x^3 - 2x + 1)$$

To simplify, first eliminate the parenthesis and then combine like terms.

$$\begin{aligned}(3x^2 - 4x - 3) + (x^3 - 2x + 1) &= 3x^2 - 4x - 3 + x^3 - 2x + 1 \\ &= x^3 + 3x^2 - 6x - 2\end{aligned}$$